

2016 ANNUAL REPORT

Onondaga County Soil and Water Conservation District



“Promoting excellence in the wise use of our rural and urban natural resources.”

A MESSAGE FROM OUR EXECUTIVE DIRECTOR



The year brought with it some unexpected challenges! The drought of 2016 and low milk prices for dairy farmers made it difficult to get agricultural non-point source reduction projects installed. Conservation projects that did get done were primarily on other types of farms and involved 3,975 acres of cover cropping across the County and the Skaneateles Lake Watershed.

In true “District Spirit” the District continued to “never say no”. The District continued to branch out and take on new challenges and opportunities as needs arose across the County. We have been able to do this because of the diverse knowledge, skills, and abilities as well as the safe work habits of our employees. The District is currently involved in five major program areas:

- Agriculture
- Municipal Hydroseeding
- Invasive Species Management (Terrestrial and Aquatic)
- Stormwater Management
- Environmental Training

We are fortunate to have a knowledgeable staff who are proficient grant writers. By leveraging our local funds, we were able to secure outside sources of grant funding that will put a lot of conservation projects on the ground. For instance, in 2016, the District received \$48,500 from the County Agricultural Council and leveraged it into the NYS Environmental Protection Fund Grant Round 22. The staff secured four grants worth \$1.019 million to implement 54 projects on nine farms. This funding has a three-year contract so we will be ready to work with the farmers as soon as the agricultural economy improves.

THANK YOU to our Board of Directors, farmers, municipalities, partner organizations, and neighboring Soil and Water Conservation Districts that worked with us in 2016. It was exciting to have people come together and work expeditiously to solve environmental problems. Your support, encouragement, and enthusiasm helped make 2016 a strong year overall for the District.

Please know that *your* District is only a phone call away if you have an environmental project that we can assist with. Our strength is that we work with everybody: municipalities, private businesses, agricultural, as well as urban, suburban, and rural landowners. So, please call upon us. We are happy to help!

Mark

Mark E. Burger
Executive Director



Every year District staff celebrates Earth Day with an annual trash pickup at their office facility on County park property. 2016 marks the 4th year of participating at this site.

AEM YEAR SUMMARY

The Onondaga County Soil and Water Conservation District completed its 11th year of the Agricultural Environmental Management program in 2016. In total, 18 farms received technical assistance and 14 supporting activities were completed throughout the year.

Of the 18 farms there were 7 Tier 1 enrollments and 7 Tier 2 “questionnaires” completed. Furthermore, there were 3 Tier 3A pasture management plans completed encompassing approximately 71 acres. Lastly there were 6 Tier 5B plan updates completed which included cropland, pasture, and farmstead evaluations/updates. These plans covered a combined 450 acres of farmland.

Supporting activities include education programs, partnership activities, outreach, and program evaluation. Education programs range from teaching children about water pollution with “Fred the Fish” to Open Farm Day where

the public had the opportunity to tour working farms. Partnership activities include working with the Upper Susquehanna Coalition to bring funding to the Chesapeake Bay Watershed portion of our county and working with the Natural Resources Conservation Service on a pasture scoring workshop and the EQIP program. Outreach involves reaching out to new farms to encourage them to participate in the AEM program and program evaluation includes the reporting/maintenance of the AEM program.

The District is currently putting final additions on the above-mentioned plans in preparation for the NYS Environmental Protection Fund Round 23 Grant Cycle. There will be 15-20 farms written into the grants this year to request funding for best management practices such as: cover crops, barnyards, pasture systems, and manure storages.

2016 DROUGHT - During 2016, as many other counties in the north east were experiencing a drought, Onondaga County reached the drought level of “D-2” (Severe Drought). Accordingly, the District and SLWAP offices were receiving multiple calls from farmers throughout the late spring and summer. The farms were developing contingency plans should the drought worsen.



In the fall of 2016, two farmers called the office when they were just a few weeks away from running out of water. The SLWAP and District staff worked expeditiously to secure approvals from the NYS-DEC and acceptance from water purveyors on Skaneateles Lake (City of Syracuse) and Otisco Lake (OCWA) for water extraction. Then the farmers contracted with Dairy Support Services Company (DSSC) to pump water from the respective

lake up to their farms.

In both instances the DSSC pumped water 1.8 miles from the lake up 800 feet of elevation, through woods and fields and back yards, to get water into the farm ponds. Dairy Support Services Company used one suction pump and four booster pumps to move the water from the lake to the farm ponds. In total, DSSC pumped in excess of 2 million gallons of water into each farm pond in just a matter of days allowing hundreds of dairy cows to continue to have a drink! And, the communities had a reservoir of water again in the event it was needed for fire protection.



2016 YEAR IN REVIEW

AGRICULTURAL IMPLEMENTATION - Looking back on last year, you would be hard pressed to believe that agricultural projects were at the heart of Onondaga SWCD's workload in the past. The 2016 construction season concluded with a total of three farm implementation projects completed by the District; a WASCOD and grassed waterway on a dairy farm, 11.2 acre rotational grazing system for yak and alpacas, and an 8 acre rotational grazing system for sheep. Overall implementation dollars totaled just \$49,570 in 2016, a staggering 60% decline from 2015.

Low milk prices no doubt had a measureable effect on our progress with project implementation. Reports for the first half of 2016 show prices under \$15/hundredweight, dipping to \$13.98 in May and topping out at \$16.93 in December. Compare that to 2014 where prices exceeded \$20 all year, and you start to see a picture of economic hardship in the dairy industry.

Weather-wise, a mild winter kicked things off to an unfavorable start. In early February 2016 the Syracuse area was 40" below its average snowfall, resulting in less snow pack to melt and recharge groundwater supplies. Add in drought conditions in early spring and summer, and forage and grain production was hindered from the get-go. This lack of forage forced farms to spend more money on supplemental feed for their livestock. Spending more money on feed and alternative water diminished farmers' ability to commit to their 40% cost share for District projects. Looking at the dairy industry, specifically, you can see that it suffered two-fold from drought-related lack of forage and a reduced value for their milk products.

The silver lining, however, is a variety of small, non-dairy farms in the county that are willing to work with the District to improve environmental conditions on their farms. These operations raise beef cattle, horses, sheep, and donkeys. The owners of most of these operations have jobs off the farm, so their entire cash flow is not solely dependent on the success of the operation, and therefore, are more secure in their ability to participate with the District.

For now we are looking at 2017 with an optimistic eye, tracking the weather, and anticipating a more productive year for CNY farmers as well as our own implementation projects.



A small herd of yak graze in new paddocks. Animals are rotated in each paddock to reduce erosion on these fields.



New fencing was installed along Route 174 as part of a new animal grazing system.

2016 BEST MANAGEMENT PRACTICES

Onondaga County Soil & Water Conservation District				
BMP	No. Landowners Assisted	No. Projects Implemented	Type of Unit (acre, feet)	Total Project Cost
Cover Crop	12	20	3,376.4 acres	\$150,325.48
Streambank stabilization	2	2	200 LF	\$6,914.00
Exclusion fencing/brush clearing for grazing system	2	2	10,100 LF	\$39,347.90
WASCOB with diversion & grassed waterway	1	1	650 LF	\$10,222.00

Skaneateles Watershed Agricultural Program				
BMP	No. Landowners Assisted	No. Projects Implemented	Type of Units (acre, feet)	Total Project Cost
Cover Crop	7	7	598.6 acres	\$13,284.45
Soil sample analysis	2	2	14 samples	\$376.00
Nutrient Management revisions	3	3	2,798 acres	\$6,000.00



District staff, summer of 2016

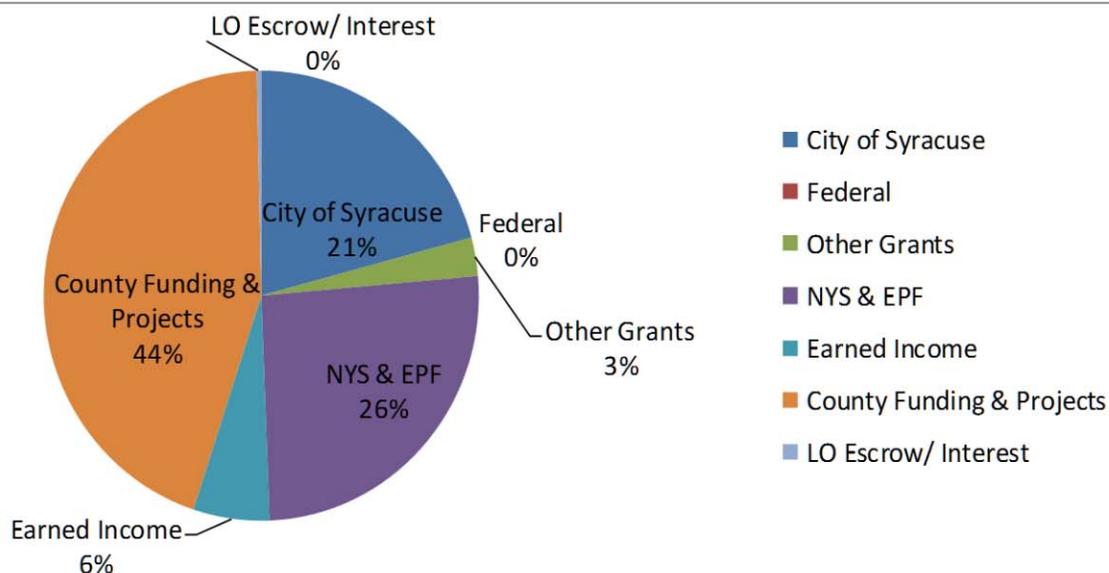
2016 Summary of Project Activity in Onondaga County and Skaneateles Lake Watershed

Legend

- Ash Tree Injections
- Ash Tree Removals
- MS4 Outfall Inspections
- Stream Inventory Debris Jams
- ▲ DEC 4 Hour Training
- Water Chestnut Pull
- District BMPs**
- ◆ Cover Crop
- Heavy Use Area Protection
- Manure Storage
- ◑ Pasture System
- ★ Stream Bank Stabilization
- SLWAP BMPs**
- ◆ Cover Crops
- + Nutrient Management
- ✱ Plan Updates
- ⚑ Revision Project
- Skaneateles Lake Watershed
- Onondaga County Boundary
- Hydroseeding (sqft)**
- 0
- 1 - 7500
- 7501 - 36000
- 36001 - 56000
- 56001 - 94000
- 94001 - 125500
- 125501 - 136000
- 136001 - 189000
- 189001 - 286500



2016 YEAR IN REVIEW



Grant funding continues to drive our work at the District and we would not have successful programs without the generous funding support from the City of Syracuse, Onondaga County, NYS Environmental Protection Fund, OCWA, the Natural Resources Conservation Service, and the landowner cost-share provided by farmers and municipalities that participate in our programs.

On March 3rd, representatives from the Onondaga County Soil & Water Conservation District and the Skaneateles Lake Watershed Agricultural Program met with seven New York State senators and assembly members in Albany, as part of the statewide legislative effort to reach out for their support to Districts. The day was planned with appointments to meet and talk with these legislators and thank them for their support of the Environmental Protection Fund (EPF) and the Ag Non Point Source Grant Program, and to discuss pending bills affecting conservation programs. The EPF, available only to Soil & Water Conservation Districts, provides the primary funding source for Districts to implement agricultural best management practices to help improve water quality. The District works with landowners in all six of Onondaga County's watersheds.

That day we received updates on the legislative process and each legislator shared valuable insight regarding upcoming bills.



(l-r) David Perry, WAPRC member, David Coblurn At-Large rep for the District Board, Edward Tidd, WAPRC member; Aaron Buchta, SWCD staff, and Rich Abbott, City of Syracuse Department of Water.

“It is our vision to live in a society in which future generations will have natural resources necessary to sustain and enrich their quality of life.”

2016 YEAR IN REVIEW

ASH TREE MANAGEMENT - In 2016, the District continued to implement ongoing ash tree management programs with Onondaga County, the Town of DeWitt, and the Town of Marcellus. The District also established a new partnership with the Town of Clay and offered assistance with the Town's own tree preservation efforts.

In 2016, the District removed 2,200 ash trees from County property. Trees were removed from County highway right-of-ways in the Towns of DeWitt, Manlius, and Cicero as well as Onondaga Lake County Park. A total of 2,738 trees have been removed since the project began in 2014.

To preserve the trees, the District treated, with a systemic pesticide, a total of 425 ash trees (6,371 diameter inches). Of those 425 trees, 184 were County trees which were treated at Highland Forest, Pratts Falls, Jamesville Beach, Carpenter's Brook, and Beaver Lake County Parks as well as the Onondaga Community College campus. For the Town of Marcellus, 50 were treated in Marcellus Park. For the Town of DeWitt, 191 were treated at Ryder Park and along Town right-of-ways. A total of 671 trees (12,127 diameter inches) have been treated since the project began in 2014. All trees are on a two-year treatment cycle and the District is continuing to add trees each year. The District also lent injection equipment to the Town of Clay and assisted them with getting started on the Town's own ash tree preservation project.

In the spring of 2016, the District partnered with Onondaga County, Onondaga Lake Park,

and Cornell Cooperative Extension to plant 130 non-host, native trees in Onondaga Lake Park. The planting was made possible by community volunteers including FFA students, National Grid, and the general public. It was funded in part by a NYS DEC Urban and Community Forestry grant.



The ash tree on the left was treated with a pesticide by the District to protect it from the emerald ash borer. The ash tree on the right was left untreated, and is showing signs of succumbing to the invasive insect.

CRITICAL AREA SEEDING UPDATE - A total of 43 acres of disturbed area was hydroseeded throughout Onondaga County, most typically relating to road ditch clean-outs. That translates to over 50 miles of road bank stabilization. A special thanks goes out to Onondaga County DOT, NYSDOT, and the participating local highway departments. The District also seeded roughly 5 acres of disturbed area on agricultural BMP projects.

AGRICULTURAL ASSESSMENT - The Agricultural Assessment Program was established under NYS Agricultural District Law to provide a means of preserving farmland. It is designed to provide a partial exemption from taxation for farmland where pressures from competing land uses cause the market value of the land and the tax assessment to exceed the economic value of the land. The Onondaga County SWCD completed 110 Soil Group Worksheets (SGW) for landowners applying for an Agricultural Assessment in 2016. There was a \$30 charge per parcel.



Seeding at new Amphitheater

2016 YEAR IN REVIEW

STORMWATER INSPECTION - Onondaga County Soil & Water Conservation District (SWCD) staff was involved in the County Stormwater Program in many ways during 2016. Staff members continued to complete Municipal Stormwater Outfall inspections throughout the County, completing over 500 location inspections from the provided outfall inventory. The District also participated in construction site inspections on 9 projects during the construction season, and completed 4 Stormwater Pollution Prevention Plan (SWPPP) reviews. The District was involved in



the development of the County Stormwater Annual Report and Semi-Annual Report which was prepared and submitted to the NYS-DEC in May and November respectively. Onondaga County SWCD assisted the CNY Regional Planning and Development Board with a special “Expanded Area Outfall” inventory and inspection for new outfalls and Stormwater management Best Management Practices during 2016. This contract was completed at the end of 2016.

TIRE RECYCLING - Approximately 7 land owners recycled tires on their farms in the Otisco Lake watershed.



Our proposed number of tires to be recycled (1,000) was exceeded to an estimated number of 2,600 tires (26.18 tons). The tires were recycled at Seneca Meadows landfill in Waterloo, NY. The facility has the technology to chip/shred the tires into an aggregate that is used in place of stone for leachate collection in their landfill system and collects gas to produce electricity. Thank you to Cates’ Co-Vale Holsteins and Volles Dairy Farm for hosting the collection dumpsters.

SNOW & ICE WORKSHOP - Seventy municipal highway department personnel attended a Snow & Ice Control Workshop at the NYS Fairgrounds on Wednesday, November 9. They represented 27 communities from across central New York. Participants learned about:

- Snow & ice control materials
- Cost of material usage, application, and cleanup
- Phosphate regulations and certified materials
- Environmental benefits and cost savings of proper equipment calibration
- “Train-the-Trainer” On-site spreader calibration (11 municipalities brought trucks)



Presenters include: Jim Crow (a Cornell Local Roads instructor and V. Manlius DPW employee) and Tim Baker and Tim Weir (NYS DOT Region 3). Vendor displays were provided by: Force America (Ed Sichler) and Tracey Road Equipment (Leo Schroeder and Jay Barnwell).

As a new initiative in 2016, team of four hand-pulled plants from canoes along a 19 mile stretch of the river from Coopers Marina in Baldwinsville, NY to Horsehead Island. The main goal of the initiative is to remove all the chestnuts that can possibly be pulled at each location by hand and then mark other areas that are too dense for manual removal with GPS indicators for herbicide treatment. Thirty-two thousand pounds of water chestnuts were taken from the Seneca River to an OCRRA site in Camillus for composting.

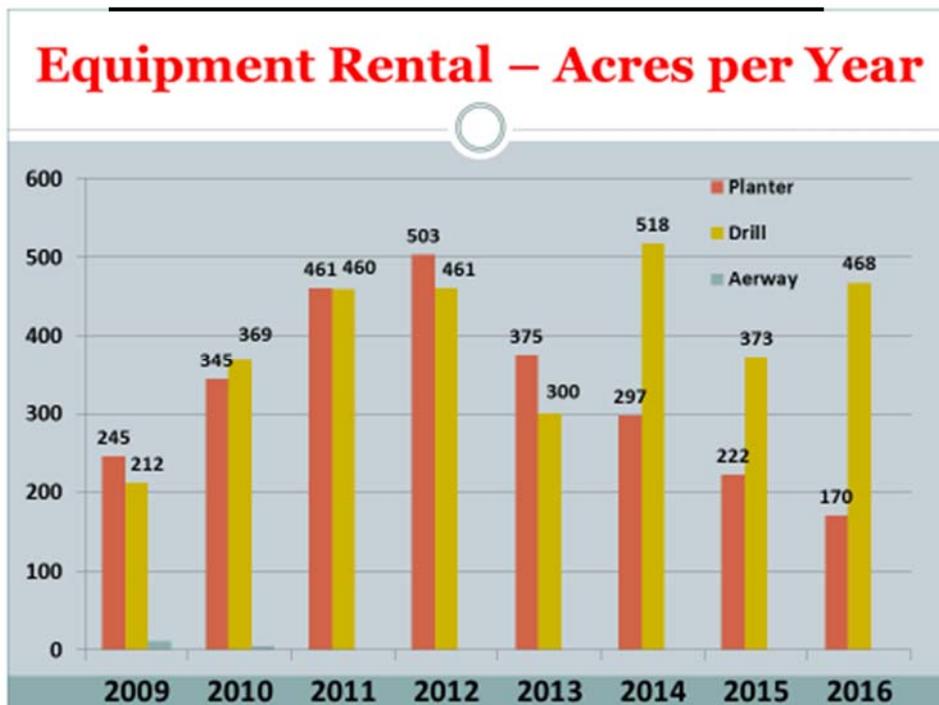


2016 YEAR IN REVIEW

TESTING NEW TECHNOLOGY - Cornell University in cooperation with Onondaga County Soil and Water Conservation District with funding from the USDA-Natural Resources Conservation Service (NRCS) Conservation Innovation Grants Program are working to reduce nitrates in farm runoff that can be discharged via tile (subsurface) drains to waterways.

Denitrifying bioreactors, also called wood chip bioreactors, utilize a carbon source in the form of wood chips that supports denitrifying bacteria that convert nitrates into nitrogen gas which is released to the atmosphere. Tile drainage water is diverted by a water control structure through the bed of wood chips. Monitoring of previously installed bioreactors in the Susquehanna and Finger Lakes watersheds has shown a 57% reduction in nitrogen that enters our streams.

The performance of the denitrifying bioreactors is being monitored to determine if these can become part of the USDA-NRCS best management practices and further developed into a Conservation Practice Standard for design and implementation in New York State.



CONSERVATION TILLAGE PROGRAM - In 2009, the City of Syracuse purchased conservation equipment for farms to rent and test. Every year since, the agricultural equipment rental program made no-till technology available to farms in the watershed and around Onondaga County. In 2016 the 6-row John Deere 1750 conservation planter was used on 5 farms for about 170 acres. The 10-foot Great Plains 1006 no-till drill worked on 19 farms for over 468 acres.

The goal is for farmers to demonstrate this technology on their own fields. With positive results, a future goal is for farmers to purchase this conservation type technology when they upgrade their own machinery.

EDUCATION & OUTREACH

CNY REGIONAL ENVIROTHON - County Soil and Water Conservation Districts across New York State organize a local Envirothon for high school students with an interest in environmental studies. They test their skills and knowledge in five science-related categories – aquatics, forestry, wildlife, soils, and a current environmental topic, (2016 topic was ‘Invasive Species: A Challenge to the Environment, Economy and Society’). Almost 100 students from Onondaga County schools joined teams from Cayuga, Chenango and Madison counties to participate in the CNY Regional Envirothon at Beaver Lake Nature Center.



Teams arrive at the Forestry station.

Envirothon emphasizes the development of practical skills such as research, teamwork and public speaking. The spirit of competition stimulates students' interests in environmental concerns and motivates them to further develop their skills and grow into environmentally-aware, action-oriented adults.

YOUNG AFRICAN LEADERS TOUR SKANEATELES WATER DEPARTMENT - A group of 25 Young African Leaders visited the City of Syracuse water department facilities in Skaneateles on July 7th. Syracuse University Maxwell School hosted this group locally during its 6 weeks of training, networking and mentoring. The group was made up of 25 to 35 year old professionals from various countries throughout Africa who work in business, civic engagement, and public administration. Over 1,000 individual African Leaders in 40 groups scattered around the country were sponsored by the U.S. Department of State through the Mandela Washington Fellowship this year.



The leaders were given an in-depth tour of City Water Department operations by Mike Lynn, the plant operator. They were shown how drinking water flows from Skaneateles Lake by 54 inch intake pipes, is treated for public safety, and then moves by gravity to the City of Syracuse reservoirs and distribution system. Rich Abbott described how the lake watershed inspection program functions. Eric Jensen gave a brief history and explanation of how the SLWAP program was initiated and operates. The Leaders participated by asking questions about soil erosion and how the program works with farmers on a voluntary basis. The group left with a greater understanding of the City of Syracuse's public water system and its watershed protection.



EDUCATION & OUTREACH

EROSION & SEDIMENT CONTROL CLASS- On Thursday, December 1 the SLWAP, District, and NYS DEC hosted a 4-hour NYS DEC Erosion and Sediment Control class for farmers at the South Onondaga VFD. Fifteen farms from across Onondaga County and the Skaneateles Lake Watershed attended. The class educates farmers about the need for a permit or Stormwater Pollution Prevention Plan to construct a barn or other agricultural building on their farm. Attendees also learned about erosion and sediment control best management practices as it relates to construction related activities on the farm.

In 2016 the District taught 13 NYS DEC 4-hour Erosion and Sediment Control classes to 272 students. Since 2009, the District has taught 87 4-hour classes to 2,422 students!



CORTLAND COUNTY WATER FESTIVAL - For almost 20 years since the start of the Skaneateles Lake Watershed Agricultural Program, staff has represented the program by participating in the annual Water Festival in the City of Cortland with various displays and exhibits.

Staff member John Adams is shown here with a small group of festival goers. The kids join in the trials and troubles of “Fred the Fish”, as he travels from a clear mountain stream, through city sewers and other waterways to the ocean. This demo has become a popular learning tool for water quality and conservation.



ANNUAL TREE & SHRUB PROGRAM - Every year the District promotes backyard conservation through its Tree and Shrub Sale. As a public outreach program, folks in the non-agricultural community have come to know the District by supporting its “Green Up The County” efforts. This is more important now than ever with Emerald Ash Borer in our community and the need to replant trees (not Ash) to help replenish the landscape.

In the spring of 2016, the District sold 4,830 trees from a selection of conifer and deciduous transplants. Also sold were 75 wildlife pacs and 45 Bluebird and bat houses. The District coordinated with OCRRA to sell 60 bags of their “Premium Compost”.



AWARDS HONORS & SPECIAL EVENTS

FARM OF THE YEAR - Emmi and Sons, Inc. in Baldwinsville was chosen to receive the 2016 Conservation Farm of the Year Award for environmental stewardship by the Onondaga County Soil and Water Conservation District. Tony Emmi is the primary owner of the farm, a third generation, 300 acre fruit and vegetable operation.

He was presented with the award at the Onondaga County Farm Fest, September 24th, at the Greenwood Winery and Bistro in East Syracuse.



The District participated in the County Farm Fest with a display table and brochures for the public.

Doug Fisher, Program Manager assists with a tour at one of the featured farms.



COMMUNITY SERVICE AWARD - Roland Ivers received the 2016 NYCDEA Community Service Award at the 2016 Water Quality Symposium banquet in Syracuse. To date Roland has logged in 2,390 hours of volunteer service.

A graduate of Hartwick College with a BA in Physical Sciences, Roland spent the last ten years of his career working for the NYS DEC in Albany.



MUNICIPAL PARTNER AWARD - Onondaga County Soil & Water Conservation District has recognized the Town of Camillus Highway Department as the **Outstanding Municipal Partner** recipient for the 2016 construction season. The Highway Department implemented a fairly large restructuring project that narrowed many Town roads in 2016. One of the direct results of this project was an increase in grassed area adjacent to the highways, which reduced stormwater volume and increase infiltration of stormwater in the soil. Onondaga County Soil & Water Conservation District worked with the Town Highway Department to hydroseed these areas to help with the grass establishment. A total of 5 acres of disturbed soil was protected as a result of this project.



Board of Directors

F. Spencer Givens	Chair - At-Large Rep.
Craig Dennis	Vice Chair - At-Large Practical Farming
Wayne Norris	Treasurer - Grange Rep.
John Lemondes	Farm Bureau Rep.
David Coburn	At-Large Non-ag
David H. Knapp	County Legislator
Derek Shepard, Jr.	County Legislator

District Staff

Mark Burger	Executive Director
Doug Fisher	Program Manager
Gwyn Olenych	Account Clerk II
Maggie Connelly	Administrative Assistant
Jeremiah Eaton	Resource Conservation Specialist
Aaron Buchta	Resource Conservation Specialist
Eric Renfer	Resource Conservation Specialist
Eva Sztachmiller	Resource Conservation Specialist
Rebecca Bray	District Conservation Technician

Skaneateles Lake Watershed Agricultural Program Watershed Agricultural Program Review Committee

Mike McMahon	Chair - Cortland County
Steve Nemec	Vice Chair - Cayuga County
Gaelen Head	Cayuga County
Jim Greenfield	Onondaga County
Eric Brayman	Onondaga County
Ed Tidd	Onondaga County
David Perry	Cortland County
Rich Abbott	City of Syracuse
Dale Kehoe	Non-voting Advisory Member

SLWAP Staff

Mark Burger	Program Manager
Eric Jensen	Resource Conservation Specialist
John Adams	District Conservation Technician

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The Onondaga County Soil & Water Conservation District was chartered on March 6, 1944 as one of 58 special purpose Districts in New York State, one in each county including the five boroughs of New York City. Each District is governed by a Board of Directors who set program policy to be implemented by the District staff.

All programs and services are offered on a nondiscriminatory basis without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status.